

REMARKS

Summary of the Office Action

Claims 1, 11, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Masaki et al. (JP 10-153788) in view of Whetten (US 5,153,754).

Claim 1 stands objected to for minor informalities and/or defects.

The proposed drawing correction filed on August 26, 2002 have been approved, and corrected drawings are required.

Summary of the Response to the Office Action

Applicants have not amended any claim. Accordingly, claims 1, 11, and 20 are pending for consideration.

Applicants respectfully submit herewith a Submission of Replacement Formal Drawings includes the approved changes to FIGs. 33 and 34.

Applicants respectfully submit herewith an Information Disclosure Statement.

Objection to the Claims

Claim 1 has been objected to for minor informalities and/or defects. Specifically, the Office Action alleges that “[c]laim 1 recites the subject matters that the recited wire is coated with Ti along at least one side and with titanium oxide along at least three sides, but fails to clarify how many sides the wire has.” Furthermore the Office Action alleges that “[a]ccording [to] the disclosure (see FIG. 3), the wire has only four major sides; and, if at least one of them has already been covered with titanium, the recited titanium oxide would only cover at most three sides, instead of at least three sides.” Applicants respectfully disagree.

Initially, Applicants respectfully submit that the wire recited in claims 1, 11, and 20 inherently includes at least two end portions (i.e., beginning and end portions), as well as four sides. Accordingly, the claimed recitation of “a Cu (copper) layer contacted along at least one side by a first coating film made of titanium and contacted along at least three sides by a second coating film made of titanium oxide” is accurate and correct since the wire inherently has at least six sides. Thus, Applicants respectfully assert that claiming how many sides the wire has is not necessary. Therefore, Applicants respectfully request that the objection be withdrawn.

All Claims Define Allowable Subject Matter

Claims 1, 11, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Masaki et al. (JP 10-153788) in view of Whetten (US 5,153,754). The rejection is traversed as being based upon a combination of references that neither teaches nor suggests the novel combination of features recited in independent claim 1, and hence, dependent claims 11 and 20.

Initially, Applicants respectfully submit herewith a partial English-language translation of Masaki et al. that was obtained from the Japan Patent Office website to provide a more thorough understanding of the disclosure of Masaki et al. Applicants respectfully note that, as indicated at the top portion of page 2 of the partial translation, “the translation may not reflect the original precisely.”

Independent claim 1 recites “a wiring comprising a Cu (copper) layer surrounded along at least one side by a first coating film made of titanium and surrounded along at least three sides by a second coating film made of titanium oxide.” In contrast to the Applicants’ claimed invention, Masaki et al. apparently teaches (paragraph [0026]) the disadvantages of providing an

alloy film 32 having a TiOx film 33a and TiNx film 35, wherein a crack 34 may be formed due to stress generated between the alloy film 32 and the underlying glass substrate 31. Accordingly, Applicants respectfully assert that Masaki et al. actually teaches the unsatisfactory effects of forming different materials on an alloy film.

MPEP § 2143.02 instructs “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no motivation to make the proposed modifications. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).” Accordingly, since Masaki et al. teaches the unsatisfactory effects associated with forming different electrically insulating materials on an alloy film, Applicants respectfully assert that combining the teachings of Masaki et al. and Whetten would actually result in formation of stress between the alloy film and the underlying substrate, thereby forming cracks in the electrically insulating material.

Moreover, although Whetten may teach forming a scan line having a first Ti layer 54 formed between a substrate 34 and a second Mo Al layer 56, Whetten fails to provide any motivation to substitute an electrically insulating film with electrically conductive materials. MPEP §2143.03 instructs that “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974).” Accordingly, because the applied art does not teach or suggest **all the claim limitations**, and neither of Masaki et al. nor Whetten provide proper motivation to combine their teachings, Applicants respectfully assert that the Office Action has not established a *prima facie* case of obviousness.

For at least the above reasons, Applicants respectfully assert that the rejection under 35 U.S.C. § 103(a) should be withdrawn because Masaki et al. and Whetten, whether taken alone or in combination, teach or suggest the novel combination of features recited in independent claim 1, and hence dependent claims 11 and 20.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and reexamination of the application and timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the undersigned to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such as an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

By: Mary Jane Boswell

Mary Jane Boswell

Reg. No. 33,652

Date: October 9, 2003

CUSTOMER NO. 009629

MORGAN, LEWIS & BOCKIUS LLP

1111 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

(202) 739-3000